

Appl. No. 10/764,191  
Atty. Docket No. CM2596MC  
Amdt. dated 01/07/2005  
Reply to Office Action of 10/07/2004  
Customer No. 27752

### REMARKS

#### Application Amendments

Claims 1-17 are pending in the present application. No additional claims fee is believed to be due.

Claims 12-14 have been amended as shown above to recite methods having a positive step. Support for these amendments can be found in the original claims and at page 2, lines 1-25 of the specification.

It is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

#### Rejections Under 35 USC 112, Second Paragraph

Claims 12-14 are rejected under 35 USC 112, second paragraph, as being indefinite. Specifically, the Examiner notes that claims 12-14 provide for the use of a composition and the use of a developer, but no positive steps of a method are set forth.

As noted above, claims 12-14 have been amended to recite methods having a positive step. Thus, Applicants respectfully request that this rejection be withdrawn.

#### Rejections Under 35 USC 103(a) Over International Application WO 98/52519 to Pratt in view of US Patent No. 5,578,087 to Audousset et al.

Claims 1-17 are rejected under 35 USC 103(a) as being unpatentable over International Application WO 98/52519 to Pratt ("Pratt") in view of US Patent No. 5,578,087 to Audousset et al. ("Audousset"). The Examiner asserts that Pratt teaches a hair coloring composition comprising the developer 2,6-dichloro-para-aminophenol which is capable of undergoing only a single electrophilic attack reaction, the couplers N,N-dimethyl acetoacetamide and N,N-diethyl acetoacetamide which read on Applicants' formula (II) of claim 10, and couplers selected from pyrazolone compounds which are similar to Applicants' formula (IV) of claim 11. The Examiner also asserts that Pratt discloses a method for coloring hair and as well as a hair coloring kit. However, the Examiner acknowledges that Pratt does not disclose a composition comprising developers

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selected from amino aromatic systems capable of being oxidized and thereafter undergoing at least two electrophilic attack reactions, as Applicants' claims require.

Then, the Examiner further asserts that Audousett teaches a hair coloring composition comprising as developers both para-phenylenediamine, which undergoes at least two electrophilic attack reactions, and N,N-bis (□-hydroxyethyl) para-phenylenediamine, which undergoes a single electrophilic attack reaction. Thus, the Examiner concludes that it would have been obvious to one of ordinary skill in the art to modify the composition of Pratt by additionally incorporating the developer para-phenylenediamine of Audousett because Audousett teaches that para-phenylenediamine and N,N-bis (□-hydroxyethyl) para-phenylenediamine are equally useful in a hair coloring composition. Applicants respectfully traverse the present rejection based on the following comments.

- A. A *prima facie* case of obviousness has not been established because there is no suggestion or motivation to modify and combine the cited references.

The combination of Pratt and Audousett does not establish a *prima facie* case of obviousness because there is no suggestion or motivation to modify the cited references to achieve Applicants' hair coloring composition. Modifying the composition of Pratt by additionally incorporating the developer para-phenylenediamine as taught in Audousett would change the principle of operation of the invention of Pratt (see MPEP 2143.01). Applicants' claimed hair color composition requires (i) at least one developer selected from amino aromatic systems capable of being oxidized and thereafter undergoing *only a single electrophilic attack reaction*, (ii) at least one developer selected from amino aromatic systems capable of being oxidized and thereafter undergoing *at least two electrophilic attack reactions*, and (iii) at least one coupler. Applicants' claimed hair color compositions provide improved root-to-tip evenness of color applied to the hair versus compositions containing only single electrophilic attack developers and also can provide improved root-to-tip evenness versus compositions containing only multiple electrophilic attack developers of certain types.

In contrast, Pratt is directed to hair coloring compositions comprising (a) developers selected from amino aromatic systems capable of being oxidized and

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thereafter undergoing *a single nucleophilic attack reaction*, and (b) certain described couplers. Pratt specifically teaches that "the structure of the developer is such that it reacts substantially only at one position, which is normally an amine. Suitable developers of this type include amino aromatic systems in which there is only one primary amine group, at which reaction occurs, other amine and other reactive groups being protected by blocking substituents." See page 5, lines 30-36 of Pratt. Pratt describes the advantage of selecting only a developer which reacts substantially just at one position as being that the disclosed couplers couple with the developer at only one position so as to produce only one colored dimer, which results in extremely efficient formation of color molecules and improved accuracy in predicting the final overall color produced. These color molecules are described as having improved wash-fastness. Thus, the principle of operation of the composition of Pratt is based on the requirement of selecting only a developer which is capable of undergoing only a single nucleophilic attack reaction. As a result, Pratt teaches away from using a developer which is capable of undergoing more than one nucleophilic attack reaction, such as unsubstituted para-phenylenediamine.

Audousset is directed to dyeing compositions containing para or ortho type oxidation dye precursors (*i.e.*, developers) and couplers consisting of at least one benzimidazole derivative and at least one meta-phenylenediamine. The compositions of Audousset are described as providing ashen or blue hues in hair which display tenacity with respect to exposure to UV irradiation and to repeated washes. These benefits are provided by using the described coupler derived from benzimidazole and meta-phenylenediamines. Audousset teaches that a variety of para or ortho type dye precursors (*i.e.*, developers) may be used in combination with the benzimidazole derivative coupler to achieve the described benefits. However, Audousset fails to disclose any benefit in selecting one of the suitable developers over another from among the extensive list disclosed, much less any benefit from specifically selecting the combination of a single attack developer and a multiple attack developer. Instead, Audousset discloses that unsubstituted para-phenylenediamine and N,N-bis (□-hydroxyethyl) para-phenylenediamine, among numerous additional developers, are equally suitable for use in the compositions of Audousset. Therefore, Audousset provides no teaching or suggestion to select specifically the combination of a single attack developer and a multiple attack developer of Applicants' claimed hair coloring composition.

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Although Audousset describes both para-phenylenediamine and N,N-bis (□-hydroxyethyl) para-phenylenediamine, there is no suggestion or motivation to additionally incorporate para-phenylenediamine in the composition of Pratt to achieve Applicants' claimed composition. Further, to do so goes directly against the principle of operation of the compositions of Pratt. It would not be obvious to one of ordinary skill in the hair coloring art to incorporate a developer which undergoes more than one electrophilic attack reaction in a hair coloring composition which expressly requires only developers which undergo a single electrophilic attack reaction to provide the intended benefits of efficient color formation, improved accuracy in predicting the final overall color produced, and wash-fastness, for particular classes of couplers. Therefore, the combination of Pratt and Audousset fails to establish a *prima facie* case of obviousness.

Accordingly, Applicants' claims 1-17 are novel and non-obvious over the combination of Pratt and Audousset.

B. Even if a *prima facie* case of obviousness has been established, Applicants have overcome the presumption by a showing of superior and unexpected results.

Alternatively, even if a *prima facie* case has been established, Applicants have overcome the presumption of obviousness by a showing of superior and unexpected results for Applicants' claimed hair dyeing composition versus hair dyeing compositions containing only single electrophilic attack developers and also versus compositions containing only multiple electrophilic attack developers of certain types. See *In re Wiechert*, 370 F.2d 927 (Cust. & Pat. App. 1967); see also MPEP 2144.09. Although arguments of counsel cannot take the place of factually supported objective evidence, rebuttal evidence can be presented in the specification. See *In re Soni*, 54 F.3d 746, 750 (Fed. Cir. 1995). "Consistent with the rule that all evidence of nonobviousness must be considered when assessing patentability, the PTO must consider comparative data in the specification in determining whether the claimed invention provides unexpected results." *In re Soni*, 54 F.3d at 750.

Specifically, in Example 1 at page 11 of the specification, Applicants have demonstrated superior and unexpected results with respect to root-to-tip color evenness for Composition 3, which is representative of Applicants' hair coloring composition.

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Composition 3 comprises 6-dichloro-para-aminophenol ("DCP") as the single attack developer, para-phenylenediamine ("PPD") as the multiple attack developer, and 3-acetamidophenol ("3AP") as a cyan coupler. Composition 3 is contrasted with Composition 1, which comprises only DCP and 3AP. Composition 3 is also contrasted with Composition 2, which comprises only PPD and 3AP. The Evenness Results are determined according to the protocol described from page 8, line 16 to page 10, line 2 of the specification, and a smaller value indicates greater evenness (*i.e.*, less variation in color). For Composition 3, the Evenness Result is 2.65, whereas the Evenness Result is 6.70 for Composition 1 and 5.00 for Composition 2. Thus, Applicants have demonstrated that Composition 3 (*i.e.*, combination of a single attack developer and a multiple attack developer) exhibits about 2.5 times better evenness than Composition 1 (*i.e.*, only a single attack developer) and about 1.9 times better evenness than Composition 2 (*i.e.*, only a multiple attack developer).

Further, in Example 2 at page 11 of the specification, Applicants have demonstrated superior and unexpected results with respect to root-to-tip color evenness for Composition 6, which also is representative of Applicants' hair coloring composition. Composition 6 comprises DCP, PPD, and 3-(N-acetyl)-amino-1-phenol-2-pyrazolin-5-one ("NAPP") as a magenta coupler. Composition 6 is contrasted with Composition 4, which comprises DCP and NAPP. Composition 6 is also contrasted with Composition 5, which comprises PPD and NAPP. For Composition 6, the Evenness Result is 5.36, whereas the Evenness Result is 13.47 for Composition 4 and 2.44 for Composition 5. Although Composition 6 (*i.e.*, combination of a single attack developer and a multiple attack developer) does not exhibit better evenness than Composition 5 (*i.e.*, only a multiple attack developer) in this example, Composition 6 does exhibit about 2.5 times better evenness than Composition 4 (*i.e.*, only a single attack developer).

Applicants respectfully submit that a 2.5 times improvement in color evenness over compositions comparable to the compositions of Pratt (*i.e.*, compositions comprising only a single attack developer) is sufficient to rebut a *prima facie* case of obviousness.

Accordingly, Applicants' claims 1-17 are novel and non-obvious over the combination of Pratt and Audousset.

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### CONCLUSION

In light of the remarks presented herein, it is requested that the Examiner reconsider and withdraw the present rejections. Early and favorable action in the case is respectfully requested.

Applicant has made an earnest effort to place their application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing, Applicant respectfully requests reconsideration of this application and allowance of Claims 1-16.

Respectfully submitted,  
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